

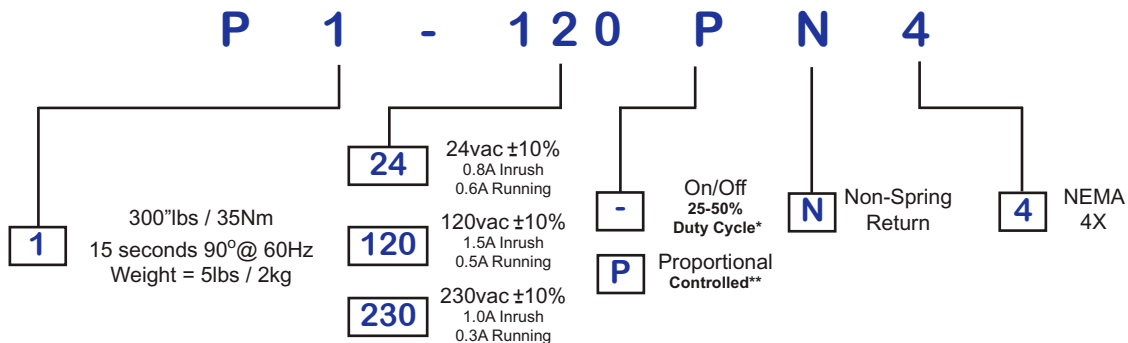


# P1 Series

Actuator Specifications	P1		
	300"lbs / 35Nm		
Torque lb/Nm	300"lbs / 35Nm		
Supply Voltage	24vac	120vac	230vac
Max Inrush Current	0.8A	1.5A	1.0A
Running Current	0.6A	0.5A	0.3A
Runtime (90°@60/50Hz)	15sec	12sec / 13sec	
Weight	5lbs / 2kg		
Mechanical Connections	ISO5211		
Electrical Entry	(2) 1/2" NPT		
Electrical Terminations	14 - 18 Ga.		
Environmental Rating	4, 4X		
Manual Override	8mm Wrench Drive		
Control	On/Off, Proportional		
Case material	Aluminum Alloy, Powder Coated		
Motor Protection	Split Phase Capacitor		
120vac or 230vac Operation	275°F/135°C Thermal H Class		
Motor Protection	DC Brush Type		
24v (AC or DC) Operation	275°F/135°C Thermal H Class		
Ambient Temperature Operating Range	-22°F to +150°F -30°C to +65°C		



An electric actuator designed for load requirements of up to 300"lbs. The actuator comes standard with two auxiliary switches (shared common), an internal low power heater, a NEMA 4X environmental rating, and in 24vac, 120vac or 230vac supply voltages. The P1 mechanical connections are ISO5211 compliant. The P1 Series can be ordered as an on/off or two position model that can also be used in bump/jog applications. Or it can be ordered with an internal proportional control card that accepts a wide range of control signals and generates multiple feedback signals.



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ISO Mounting Detail, Override boss and Female drive on P1 Series Actuators.

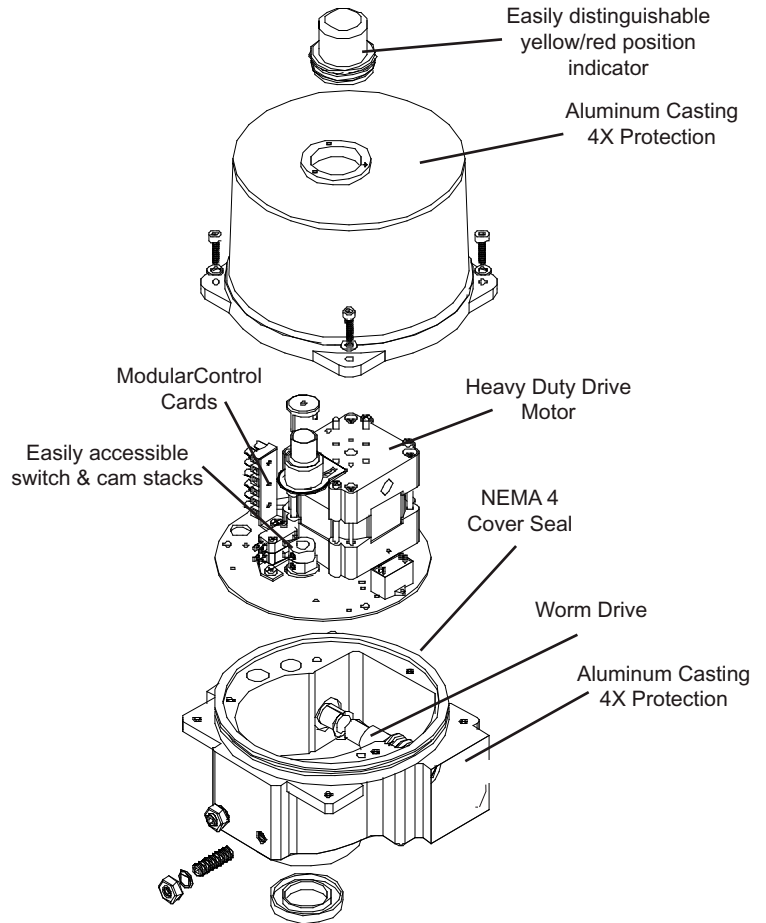
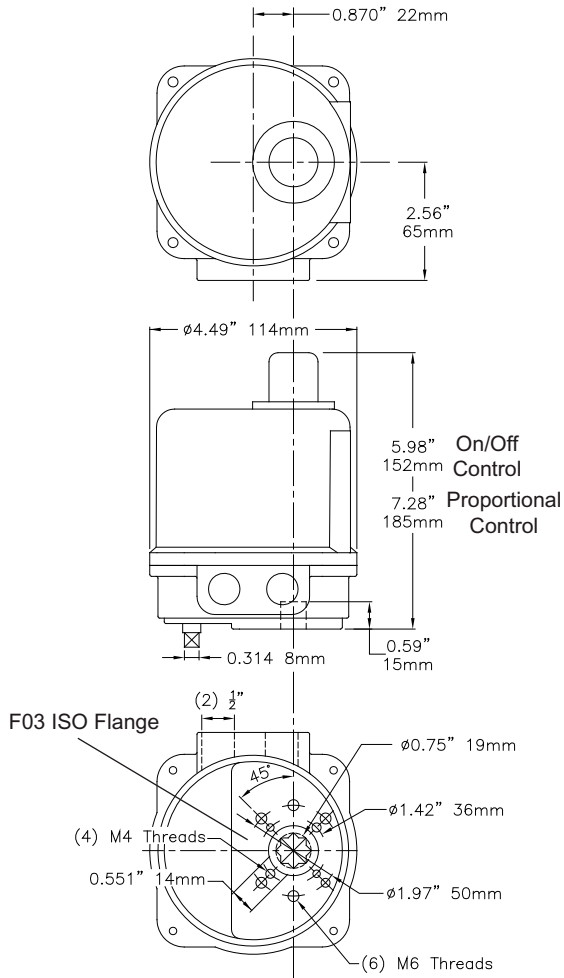
\* Duty cycle is defined as the ratio of run time vs. off time. (Application dependent)

\*\* Contolled Duty cycle is a proprietary function. (Please contact your local distributor for information)

## Application Notes:

1. These actuators are designed to be used in either a horizontal or upright position.  
Do NOT mount the actuator with the top below a horizontal position.
2. When installing conduit, use proper techniques for entry into the actuator. Use drip loops to prevent conduit condensate from entering the actuator.
3. Both NPT conduit ports MUST use proper equipment to protect the NEMA 4x integrity of the housing.
4. The internal heater is to be used in ALL applications.
5. Do NOT install the actuator outdoors or in humid environments unless it is powered up and the heater is functioning.
6. Use proper wire size to prevent actuator failure (see chart below for proper wire sizing).

## P1 Series Dimensional Data



## P Series Exploded View

(Typical)

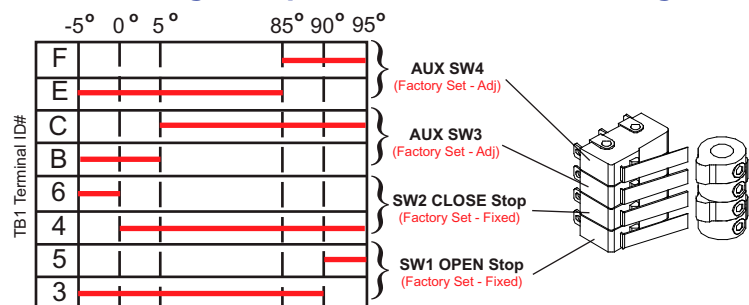
Wire sizing data is provided in the table below to assist in the selection of the proper wire size for ProMation P1 series actuators using various wire sizes over distance. Please make sure to reference the correct voltage and do not exceed the indicated length of the wire run for each model.

## Wire Sizing Data

MAX distance between Actuator and Supply (feet)			
Wire Gage	P1-24 0.8A	P1-120 1.5A	P1-230 1.0A
18		275	1056
16	52	433	1659
14	84	699	2681

Switch sequencing data is provided in the table below to show the change-of-state points during the rotation of the actuator from OPEN to CLOSED and back again. Switches for terminals 3 thru 6 are set at the factory and should NOT be changed. The INCLUDED auxiliary switches SW3 & SW4 are for terminals 7 thru 12 and those setpoints may be modified if need be.

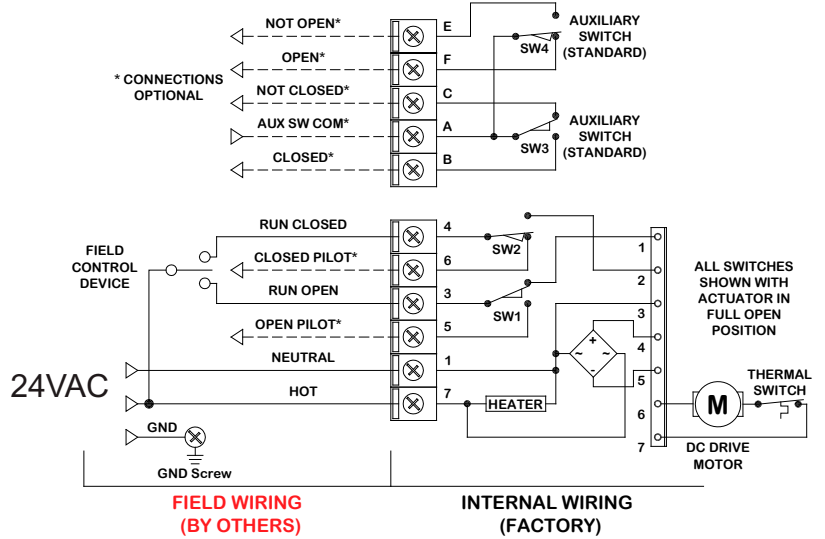
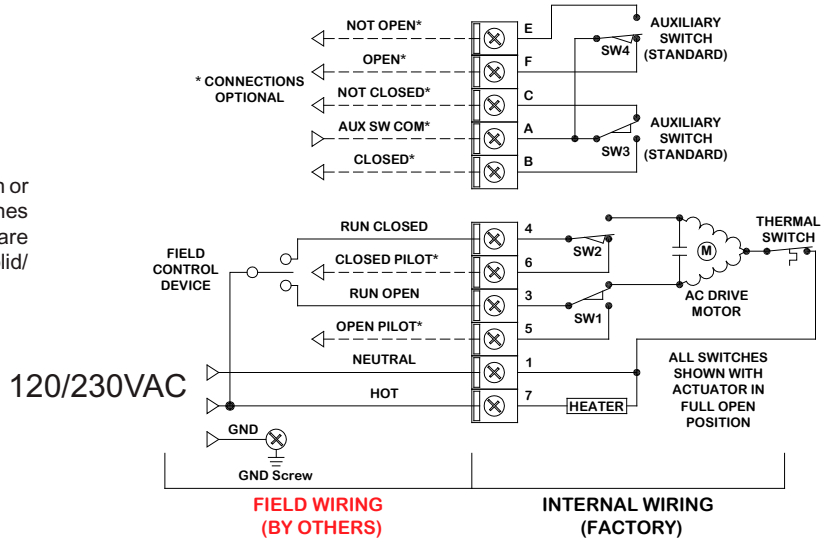
## Switch Logic Map and Switch/Cam Arrangement



# Wiring Diagrams for P1 Series -

## On/Off/Jog Control

Field Control Device may be relay contact, Switch or Triac type. Pilot device 5A MAX. Auxiliary switches are rated 5A @ 250vac MAX. Terminals A-F are dry type Form C. Terminals accept 14-18ga solid/stranded wire.



## Proportional Control

Control Signal Inputs (selectable and programmable):  
2-10vdc, 1-5vdc, 4-20mA

Common cannot be ground referenced. Signal return MUST be isolated from ground.

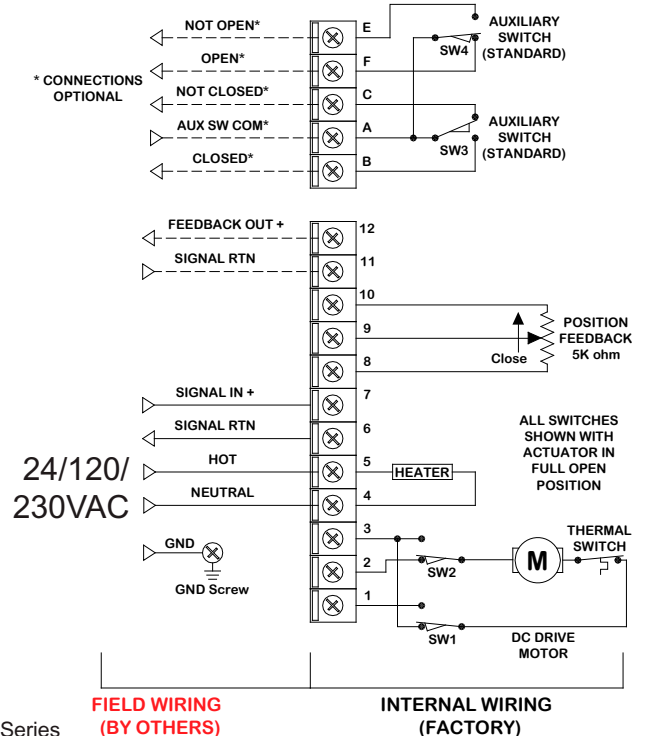
Input impedance: 100k ohms (2-10vdc)  
200k ohms (1-5vdc)  
250 ohms (4-20mA)

Sensitivity: 100mV (2-10vdc)  
50mV (1-5vdc)  
80uA (4-20mA)

Feedback Signal Output (selectable):  
2-10vdc or 4-20mA  
Referenced to Signal Return terminals.  
Max Load: 500 ohms

There are no alarm on fail functions on this controller.

Terminals accept 14-18ga solid/stranded wire.



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